California Department of Forestry and Fire Protection/ San Luis Obispo County Fire Department

2005

Fire Management Plan

Executive Summary

San Luis Obispo County is located on the Central Coast of California approximately halfway between San Francisco and Los Angeles. The California Department of Forestry and Fire Protection provides fire protection for State Responsibility Areas and as the County Fire Department protects most unincorporated areas within the County. In addition CDF/San Luis Obispo County Fire Department provides fire protection under contract for the City of Pismo Beach, the Community of Los Osos and the town of Avila Beach.

The County encompasses 2.1 million acres of which 1.5 million are protected by CDF/San Luis Obispo County Fire. County population is approximately 250,000. CDF/SLO County Fire provides protection to 61,000 people in the unincorporated areas including Los Osos and Avila Beach and 8000 people in the City of Pismo Beach. Located within the direct protection area are Diablo Canyon Nuclear Power Plant, San Luis Obispo County Airport, Hearst Castle, and Camp San Luis Obispo—home of the California National Guard, Tosco Oil Refinery and the Hartford Ocean Pier Complex.

CDF/County Fire has identified wildland fires as a risk to residents of San Luis Obispo County. To mitigate this risk, CDF/County Fire initiated a Fire Management Plan in 1999. This plan is updated yearly and its goals are to:

1) Increase the safety to residents and firefighters during wildland fires
2) Reduce the costs and losses associated with wildland fires

The Fire Management Plan is a dynamic living document, responding to ever changing environmental and social conditions. The Fire Management Plan utilizes the following strategies to accomplish the goals listed above:

1) Collaboration with Stakeholders
2) Risk Assessment of Wildland Urban Interface Areas (WUI)
3) Development of an Action Plan
4) Monitor Effectiveness of programs and projects

There are numerous stakeholders involved in mitigating the risk from wildland fires. Focused and coordinated collaboration is very important. CDF/County Fire is an active participant in the San Luis Obispo County Community FireSafe Council (SLOFSC) and instrumental in its formation and continued success. The primary objective of the council is to provide education, exchange of information and foster fire prevention and fire safety within the County of San Luis Obispo. The SLOFSC is made up of a board of directors who represent the main stakeholders who are affected by wildland fires. The SLOFSC gives CDF/County Fire a unique opportunity to work with other agencies in solving wildland fire related issues. CDF/County Fire also works directly with homeowners during our yearly hazard reduction inspection program. CDF/County Fire staff will also have many opportunities to work with residents, homeowners associations, and other governmental agencies during the preparation of Community

and Rural Area Wildland Fire Protection Plans throughout 2005-2006. These plans are being initiated to deal specifically with the risks involved with these communities.

CDF/County Fire staff also performs a comprehensive “Risk Assessment”. Risk is assessed at the county, community and individual home level. For the countywide analysis, CDF/County Fire staff utilizes the CDF “Assets at Risk Assessment”. This assessment utilizes Geographical Information Systems (GIS) to determine areas of high, medium and low assets at risk. This assessment is based on the best available data. Since the accuracy of some of the base data is not complete, a continued analysis will be necessary in the future. Because of these limitations we augmented the assessment with expertise from field Battalion Chiefs. The Battalion Chiefs were able to identify additional areas and the final product is a list of target areas needing mitigation to reduce the risks. This year staff will begin conducting individual community assessments during the preparation of the Community Wildfire Protect Plans (CWPP’s). Lastly, we will continue to conduct our annual hazard reduction inspection program to provide corrective measures to individual home owners to better protect themselves.

CDF/County Fire will implement the action plan portion of this document to mitigate risks associated with wildland fires at three levels, at the county, community and individual level.

- At the county level, CDF/County Fire prevention staff will work with program level fire prevention practices such as reviewing, implementing and enforcing our fire prevention codes aimed at reducing structural ignitability, providing structured community fire prevention education programs, and developing fuel treatment projects.
- At the community level, CDF/County Fire staff will be developing specific projects to mitigate hazards identified in the Community Wildfire Protection Plans.
- At the individual level, CDF/County Fire staff will educate the public on specific measures to reduce risk during the hazard reduction inspection process.

CDF/County Fire has and will continue to monitor fire prevention projects for their effectiveness. Monitoring enables CDF/County Fire staff to determine if specific projects met their objectives and were financially cost effective and what future efforts are required.

Through a comprehensive risk analysis, a focused action plan, collaboration and monitoring, CDF/County Fire has developed this Fire Management Plan that will reduce the costs and losses associated with wildland fires and minimize risk to firefighters and residents in San Luis Obispo County. There are however many challenges that must be overcome for the plans success. They include, acquiring accurate data for the Asset at Risk Assessments, obtaining and administering grant funding for projects and an overwhelming need for GIS support at the local level. CDF/County Fire personnel will continue to look for solutions to these issues.

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I. Fire Environment

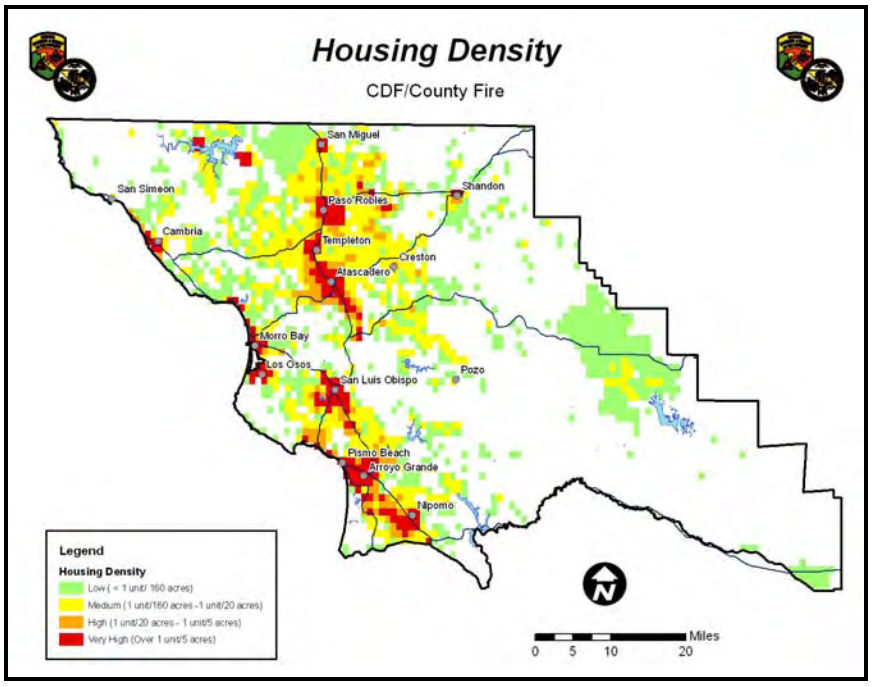
Wildland fires are affected by fuels, weather, topography and population impacts. The alignment of all these factors contributes to San Luis Obispo County being at risk for wildland urban interface fires each fire season.

A. Population Dynamics

1. Urban Areas

San Luis Obispo County covers approximately 2,124,834 acres and has a population of 254,566 people. Historically most residents lived within or in close proximity to the major communities of:

- Arroyo Grande
- Atascadero
- Avila Beach
- Baywood-Los Osos
- Cambria
- Cayucos
- Paso Robles
- Grover City
- Morro Bay
- Nipomo
- Oceano
- Pismo Beach
- San Luis Obispo
- San Miguel
- Santa Margarita
- Shandon



2. Rural Areas

Over the past decade, there has been an influx of people moving into rural areas. This results in construction of single family residences on large parcels distributed over specific geographical areas remote from urban areas and urban services. These developments are not organized as communities but are referred to by the County of San Luis Obispo Planning Department as “Rural Areas”. Rural areas have special characteristics that increase the risk to residents and firefighters during wildland fires. During major fire events, multiple structures can be threatened at the same time. Access to these structures can be difficult due to long response times, windy steep roads, and poor access. Because of the increased number of homes in the rural areas firefighters are forced to defend homes rather than offensively containing the fire.

3. Wildland Urban Interface

The Wildland Urban Interface (WUI) is composed of both interface and intermix communities. In both interface and intermix communities, housing must meet or exceed a minimum density of one structure per 40 acres (16 ha).

a) Intermix

Intermix communities are places where housing and vegetation intermingle. In the intermix, wildland vegetation is continuous, greater than 50 percent of the land cover is vegetated with combustible fuels. Intermix areas identified within the county include sections of Cambria, Suey Creek, West Atascadero, and Parkhill.

b) Interface

Interface communities are areas with housing in the vicinity of contiguous vegetation. Interface areas also have more than 1 house per 40 acres, but have less than 50 percent vegetation. In addition interface areas must be within 1.5 mi of an area that is more than 75 percent vegetated. This is to ensure that small urban parks are not classified as interface WUI.

B. Fuels

Wildland fires burn by combustion of available materials. Materials that can combust during a wildland fire are referred to as fuels. Fuels are generally natural or artificial. Natural fuels consist of the plants and their byproducts. Artificial fuels are materials that humans create and that can burn in a wildland fire environment.

1. Natural Fuels

Due to the counties varied climate, we have a very diverse population of plants. Plants are normally categorized as native or non-native (alien, exotic, foreign, introduced, and non-indigenous). Native plants are generally recognized as those occurring on the continent prior to European settlement. Non-native plants have been brought into San Luis Obispo County from other habitats, continents, regions, and ecosystems. All plants have limits as to the environmental conditions they can grow. This is usually referred to as a plants “limits of tolerance”. The environmental factors that affect these limits of tolerance are precipitation, temperature, solar radiation, soil structure, elevation, and disturbance. Natural or native plant communities have been grouped into vegetation types. The California Natural Diversity Database (CNDDB) lists the following vegetation types for San Luis Obispo County:

- Agricultural Land
- Alvord Oak Woodland
- Beaches and Coastal Dunes
- Big Sagebrush Scrub
- Black Oak Forest
- Blue Brush Chaparral
- Blue Oak Woodland
- Buck Brush Chaparral
- Buck Brush Chaparral
- Ceanothus megacarpus Chaparral
- Central (Lucian) Coastal Scrub
- Central Coast Arroyo Willow Riparian Forest

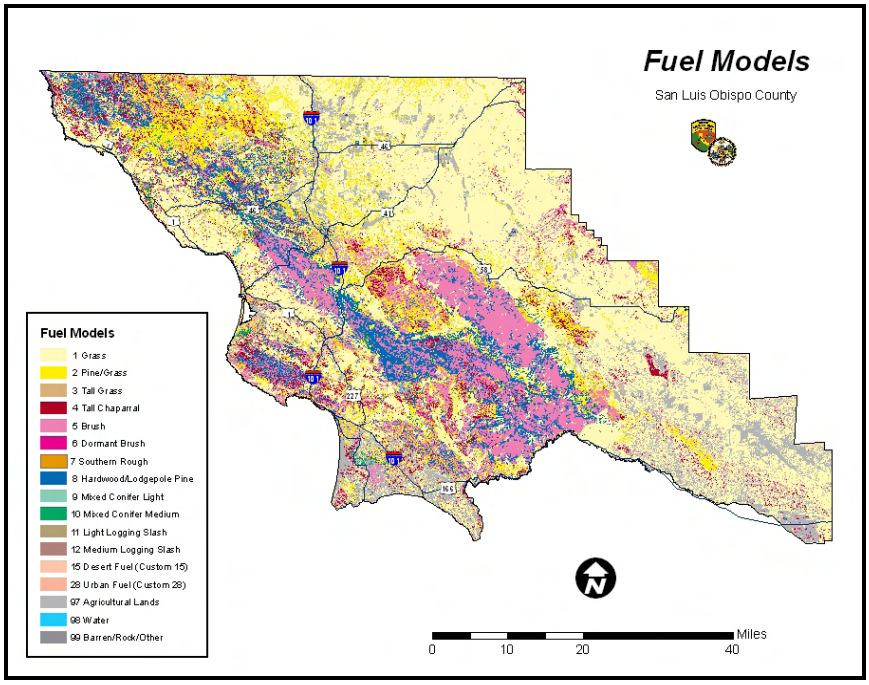
- Central Coast Cottonwood-Sycamore Riparian Forest
- Central Coast Live Oak Riparian Forest
- Central Maritime Chaparral
- Chamise Chaparral
- Coast Live Oak Forest
- Coast Live Oak Woodland
- Coast Range Ponderosa Pine Forest
- Coastal and Valley Freshwater Marsh
- Coastal Sage-Chaparral Scrub
- Coulter Pine Forest
- Diablan Sage Scrub
- Dry Salt Flat
- Dryland Grain Crops
- Foothill Pine-Oak Woodland
- Great Valley Cottonwood Riparian Forest
- Interior Coast Range Saltbush Scrub
- Interior Live Oak Chaparral
- Juniper-Oak Cismontane Woodland
- Leather Oak Chaparral
- Mesic North Slope Chaparral
- Mixed Evergreen Forest
- Mixed Serpentine Chaparral
- Mojavean Pinyon and Juniper Woodlands
- Monterey Pine Forest
- Mule Fat Scrub
- Non-Native Grassland
- Northern Coastal Salt Marsh
- Northern Interior Cypress Forest
- Open Foothill Pine Woodland
- Orchard or Vineyard
- Permanently-flooded Lacustrine Habitat
- Red Shank Chaparral
- Sandy Area Other than Beaches
- Semi-Desert Chaparral
- Serpentine Foothill Pine-Chaparral Woodland
- Upper Sonoran Manzanita Chaparral
- Upper Sonoran Subshrub Scrub
- Urban or Built-up Land
- Valley Oak Woodland
- Valley Saltbush Scrub
- Valley Sink Scrub
- Venturan Coastal Sage Scrub

a) Fuel Models

Fire managers use fuel models as a system of classifying vegetation types that have similar fire behavior characteristics. These fuel models were originally developed by Rothermel in 1972. Rothermel's fuel models were a mathematical way of quantifying fire behavior characteristics of a vegetation type. Some of the quantitative measurements used in the fuel models include:

- Fuel loading
- Size and shape
- Compactness
- Horizontal continuity
- Chemical content

Using Rothermel there are 13 fuel models. These fuel models are grouped as grass, brush, timber or slash models. In 2004, Joe H. Scott and Robert E. Burgan introduced 42 new models. However, for this plan the Rothermel models are used. The following map depicts the represented fuel models for the County of San Luis Obispo.



2. Artificial Fuels

Artificial fuels include any non-natural materials that can combust during a fire. Structures are a prime example of artificial fuels. Structures that are not designed with

fire safe building construction can easily ignite and burn. The intensity of structures when they burn can be significantly higher than the heat given off by natural vegetation. Other fuels include decks, fences, firewood, sheds, corrals, patio furniture, equipment, vehicles and other material stored in and adjacent to structures.

C. Weather

San Luis Obispo County is characterized by a Mediterranean climate, which implies that almost all of the rainfall comes during the cooler part of the year. However, it is also characterized by great diversity ranging from a cool damp north coast to the intensely hot and arid Cuyama Valley in the southeast corner. Among the factors that strongly influence local weather are the proximity of the Pacific Ocean on the west side and the arrangement of the mountain ranges, which stand parallel to the coast. Dominating the western part of the County is the Santa Lucia Range extending almost the entire length of the County. Rising sharply from the shore at the northern boundary, the Santa Lucia Range trends gradually away from the coast toward the south. South of Morro Bay a region of high hills called the San Luis Range, or Irish Hills, is situated next to the coastline.

Hwy 58 Fire - 2002

The terrain of southern San Luis Obispo County can contribute to the intensity of north and east wind events and result in a light “Sundowner” effect on the coast side of the range. The area east of Nipomo is known by firefighters as an area of unpredictable wind changes, as the influence of the coast and the inland valleys converge. This area was the location of the tragic Spanish Ranch Fire, which killed 4 CDF firefighters in 1979 and where two near tragedies occurred in 1997 on the Logan Fire. A contributing factor on both these fires was “a sudden wind shift”.

The Santa Lucia Range intercepts a large portion of the rain bearing clouds moving in from the ocean and therefore has the heaviest precipitation in the region. The range also separates the cooler, moister marine influence from the arid inland areas during much of the summer. Strong onshore sea breezes are common along the western part of the County during the summer as marine air is drawn inland by thermal low pressure.

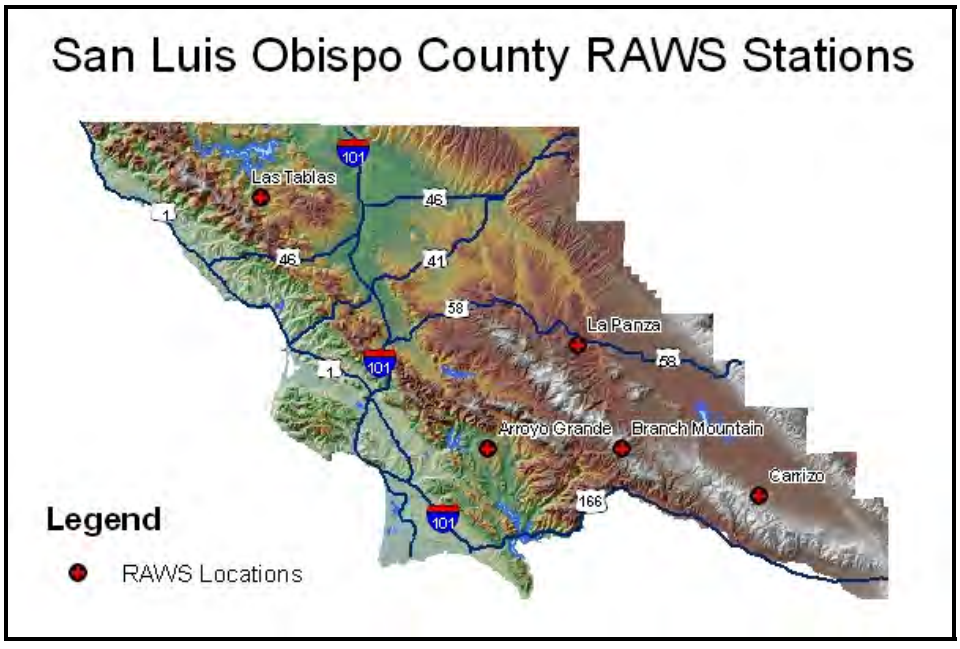
The entire area east of the Santa Lucia Range can be properly described as arid in varying degrees with the driest in the southeast corner of the County, which may only receive 5-8 inches of rain per year.

A locally important influence is the frequency of summer fog close to the coast and winter valley fog in the inland valleys. These two fog frequencies can substitute for rain in providing moisture for plant growth and their influence on live and dead fuel moisture.

San Luis Obispo County is broken into three weather zones. Using weather factors such as wind, humidity and temperature, the zones are ranked by their frequency of severe fire weather. These areas are ranked as moderate; (less than 26 days per year), high; (between 26 to 46 severe weather days per year), and very high; (more than 46 days per year with some areas having up to 88 days per year). Weather can be a deceiving factor. Although the weather can reduce the number of days that a devastating fire can occur, all areas of the County regularly are subject to days or “windows” when severe burning conditions exist.

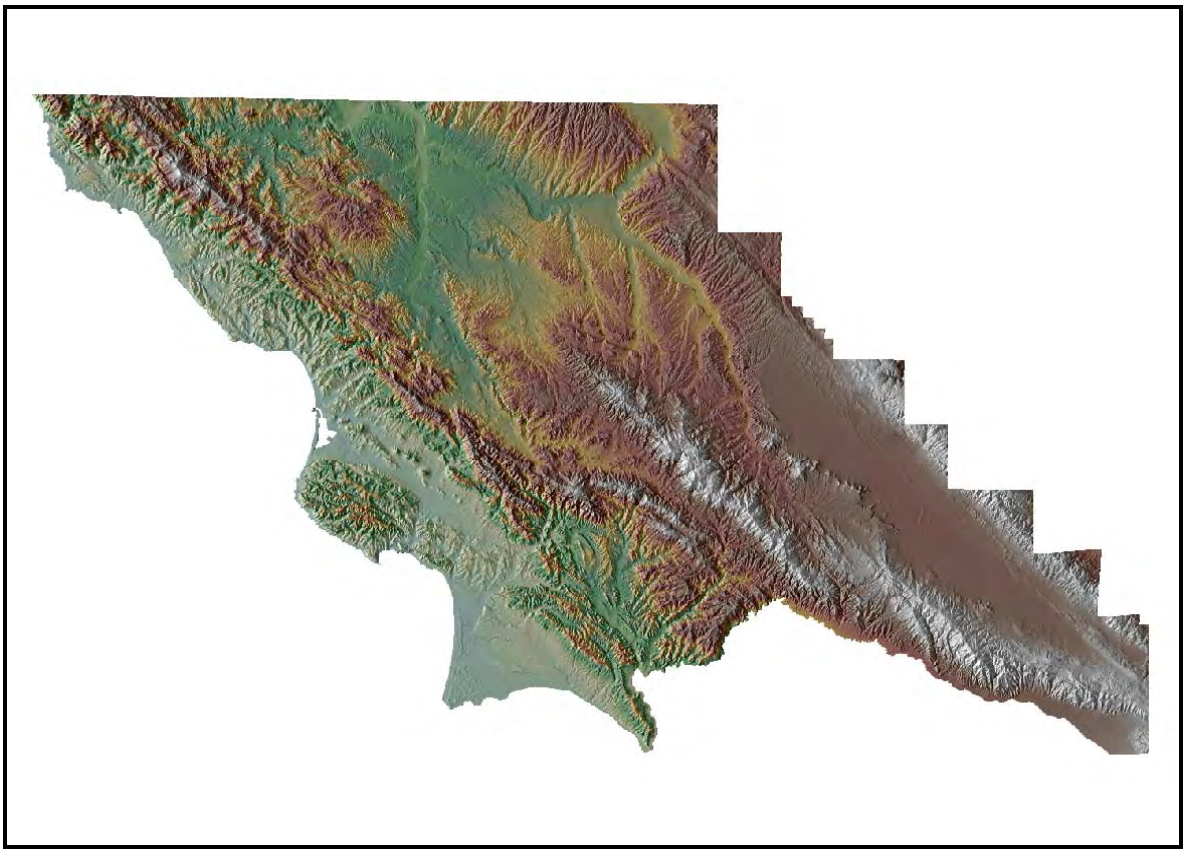
Remote Automated Weather Stations

CDF/County Fire personnel utilize a system of Remote Automated Weather Stations (RAWS) to acquire site specific weather data. The RAWS are self contained weather stations which sample weather on a periodic basis and then transfer this information via satellite to a federal server. This weather data can then be used for emergency responses and project planning. There are currently five stations located within San Luis Obispo County. Three of these stations are owned and maintained by CDF/County Fire and two are owned and maintained by the USDA Forest Service. These stations have been strategically placed to provide maximum coverage for the most critical areas within the county.



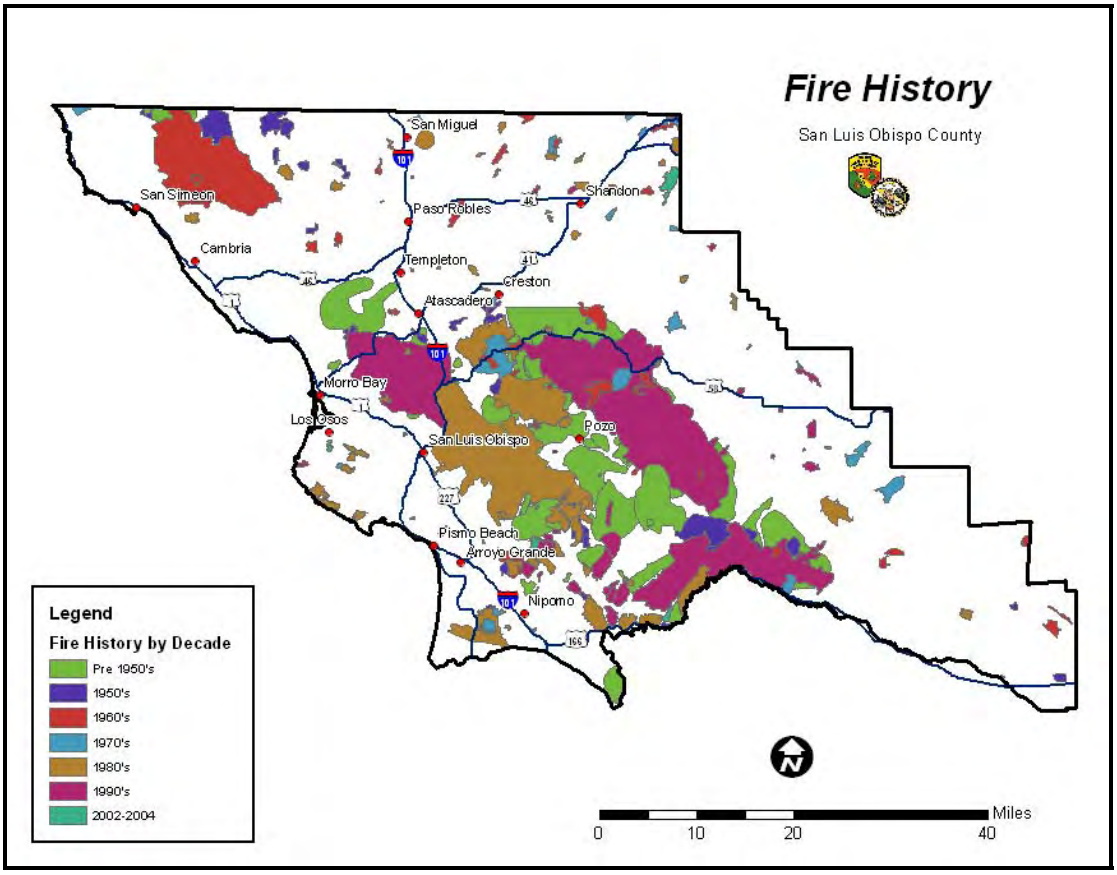
D. Topography

Topography is essentially the lay of the land. The common characteristics of topography include slope, elevation and aspect. Topography is very diverse over San Luis Obispo County. Elevation affects temperatures, humidity, wind speed and the growing season of vegetation. Aspect affects the amount of solar radiation absorbed by plants. Southern aspects normally receive maximum solar radiation. Northern aspects receive the least. Soil and plant moisture contents are the primary factor influenced by solar radiation. Southern aspects receive the most solar radiation, thus plants on this aspect must be more drought tolerant than northern aspects. Slope is essentially the steepness of the land. Steeper slopes can have a significant effect on fire behavior. Fire on the bottom of a slope can preheat fuels above it and accelerate the fire rate of spread. Topography also has an influence on local wind patterns.



E. Fire History

San Luis Obispo County is not immune to experiencing large damaging fires. The Weferling, Las Pilitas, Chispa, Highway 41, Highway 58 and the Logan, were all large damaging fires that when combined consumed approximately 344,200 acres, scores of homes and cost millions of dollars to suppress. The Highway 41 fire left an imprint on the citizens of the County. Few cannot remember where they were during the Highway 41 fire, which by itself destroyed 42 residences, caused massive power outages, shut down two major highways for over 24 hours and destroyed public radio and television transmissions. Even vital firefighting communication links were destroyed. The large areas of uninterrupted wildlands, decadent brush, mountain ranges that run parallel to the NW to SE prevailing winds and periods of severe fire weather, combine to create an extreme fire environment.



Past Large Damaging Fires in San Luis Obispo County

Fire Name/ Date	Acres	Homes Lost	Dollar Damage
Parkhill Fire 2003	1200	3	$600,000
Hwy 58 Fire 2002	1000	2	$500,000
Logan Fire 1997	50,000	No Data	No Data
Hwy 58 Fire 1996	106,000	13	$1,000,000
Hwy 41 Fire 1994	49,000	42	$10,000,000
Chispa 1989	10,000	4	$250,000
Las Pilitas 1985	75,000	12	$1,200,000
Weferling 1960	52,000	No Data	No Data

II. Collaboration

Fires in the wildland urban interface are influenced by fuels, weather and topography and not by property or jurisdictional boundaries. The fires that occurred during the 2003 Fire Siege are a perfect example. As described in "California Fire Siege 2003, The Story", there were 14 major fires, 24 lives lost, 3,710 homes destroyed and 750,043 acres burned. Response included 1,572 engines, 136 aircraft and 14,027 personnel. The estimated cost of fire suppression was $123,108,801. These fires burned through multiple jurisdictions and required suppression forces to be brought in from all over the western United States. Fires of this magnitude require a great deal of cooperation, coordination and resources. The costs and losses from these events are absorbed by the individual home owner, communities, cities, counties and state governments. San Luis Obispo County has had large fire events in the past and as history has shown there will be large fire events here in the future. The purpose of the CDF/County Fire Management Plan is to reduce the costs and losses associated from these fires. Collaboration between agencies and citizens is an important part in this process. In San Luis Obispo County there are numerous agencies that have fire protection responsibilities:

- Atascadero State Hospital Fire
- Avila Beach Community Services District
- Cayucos Fire District
- California Department of Corrections Fire
- California Department of Forestry and Fire Protection
- Cambria Community Services District
- Camp Roberts Fire Department
- City of Arroyo Grande Fire Department
- City of Atascadero Fire Department
- City of Morro Bay Fire Department
- City of Paso Robles Fire & Emergency Services
- City of Pismo Beach
- City of San Luis Obispo Fire Department
- City of Grover Beach Fire Department
- County of San Luis Obispo
- Hearst Castle Fire Department
- Los Osos Community Services District
- Oceano Community Services District Fire Department
- Templeton Community Services District
- United States Forest Service-Los Padres National Forest
- Bureau of Land Management-Bakersfield District

CDF/ San Luis Obispo County Fire staff will continue to collaborate with these agencies to develop a county wide focused effort at fire prevention education and project implementation to reduce the costs and losses associated with wildland fires.

Collaboration between agencies and the general public is also imperative. CDF/County Fire personnel have been working with residents to educate them on fire prevention measures aimed at improving the survivability of their homes. During the department's yearly inspection program, firefighters review the homeowner's compliance with wildland urban interface codes and give corrective notices and make recommendations where there are deficiencies. CDF/County Fire also participates in the San Luis Obispo County Community FireSafe Council (SLOFSC). The primary objective of the council is to provide education, exchange of information and foster fire prevention and fire safety within the county of San Luis Obispo. The council is made up of a board of directors representing the following interest groups:

- American Red Cross
- Air Pollution Control District
- Bureau of Land Management
- Cal Poly State University
- California State Parks
- County Board of Realtors
- County Board of Supervisors
- County Cattleman's Association
- CDF/SLO County Fire
- Environmental/Cambria Greenspace
- Fire Department Reps
- Fire Chief's Association
- U.S. Forest Service
- Insurance Industries
- Public Utilities/PG&E
- SLO County Farm Bureau
- Range Improvement Association
- U.C. Cooperative Extension

III. Risk Assessment

A critical component of developing a plan to mitigate the effects of major wildland fires is a comprehensive risk assessment. Assessing risk involves analyzing all of the factors that contribute to the loss of assets during wildland fires. Assets are those things that residents of San Luis Obispo County value. Examples include residences, businesses, utility infrastructure, road systems, rangeland, plants, wildlife, and watersheds. The factors that contribute to the loss of those assets during wildland fires include fuels, topography, weather, infrastructure, and firefighting capabilities. CDF/County Fire assesses risk by conducting a county wide "Assets at Risk" assessment. This assessment identifies and rates areas as having low, medium and high assets at risk. The identification and rating of these areas assists in focusing attention on and prioritizing prefire prevention programs and fuel treatments. Using the "Asset at Risk" assessment along with input from firefighting personnel, CDF/County Fire has developed a prioritized list of target areas. A significant number of the target areas are communities and rural areas. Communities and rural areas usually have an extensive list of factors that increase their risk to wildland fire. CDF/County Fire staff have developed a comprehensive risk assessment that will be utilized over the next year to assess these communities and rural areas. This assessment will identify risk factors and identify projects and programs to mitigate the risks. CDF/County Fire staff will then work with residents to develop a plan to prioritize and implement those mitigations. By utilizing a standard risk assessment, results from individual communities can be compiled and compared on a county wide basis. This information will then be used to devise countywide fire prevention programs, fuel treatments and develop planning recommendations.

A. CDF/County Fire Assets at Risk Analysis

As part of the Fire Plan, CDF/County Fire has developed a methodology for analyzing Assets at Risk (AAR). For each AAR, geographic areas will be ranked based on the potential impacts of a large fire event. This provides a series of displays of spatial rankings to assist in the identification of "high value" areas. Additional data related to fuels, weather, and CDF level of service are used to rank areas in terms of the likelihood of a large fire event. This data provides the basis for identification of "high value/high risk" areas. The analysis serves as a pointer to where pre-fire projects might have the highest benefit in terms of reduction of potential damage. Geographic Information Systems (GIS) are utilized to perform this analysis. GIS is a computer mapping and data analysis program.

1. Identifying Assets at Risk

Assets are those things that residents of San Luis Obispo County value. The following table lists all of the assets at risk analyzed in our GIS program:

Asset at Risk	Location and ranking methodology
Hydroelectric power	1) Watershed area up to 20 miles upstream from run of the river power plants, ranked based on plant capacity; 2) cells adjacent to reservoir based plants (Low rank); and 3) cells containing canals and flumes (High rank)
Fire-flood watersheds	Watersheds with a history of problems or proper conditions for future problems (South Coastal Plain, field/stakeholder input), ranked based on affected downstream population
Soil erosion	Ranking of post-fire erosion potential based on weighted combination of fuel characteristics, soil k-factor, slope, and peak rainfall.
Water storage	Watershed area up to 20 miles upstream from water storage facility, ranked based on water value and dead storage capacity of facility
Water supply	1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)
Scenic	Four mile viewshed around Scenic Highways and 1/4 mile viewshed around Wild and Scenic Rivers, ranked based on potential impacts to vegetation types (tree versus non-tree types)
Timber	Timberlands ranked based on value/susceptibility to damage
Range	Rangelands ranked based on potential replacement feed cost by region/owner/vegetation type
Air quality	Potential damages to health, materials, vegetation, and visibility; ranking based on vegetation type and air basin
Historic buildings	Historic buildings ranked based on fire susceptibility
Recreation	Unique recreation areas or areas with potential damage to facilities, ranked based on fire susceptibility
Structures	Ranking based on housing density and exposure (potential for structure loss in a large fire event)
Non-game wildlife	Public and NGO land holdings specifically for protection of non-game wildlife habitat, ranked based on fire susceptibility.
Game wildlife	Omitted due to lack of methodology/available data
Infrastructure	Infrastructure for delivery of emergency and other critical services (e.g. repeater sites, transmission lines)
Ecosystem Health	Ranking based on condition class, potential for ecological damage from a severe fire event due to deviation from historical fire return interval

2. Mapping and Ranking AAR

For the purposes of ranking assets at risk, the county is divided into a system of grids. The grids are utilized for analyzing and rating each of the assets at risk. The grid system boundaries are derived from USGS 7 ½ minute (1:24,000 scale) topographic quadrangles. Since they cover large areas (about 35,000 acres), quads are divided into 81 grid cells (Q81st cell), each about 450 acres in size. The size of these units was deemed appropriate for focusing in on high value/high risk areas.

Quad 81 Cell

For a given AAR, Q81 grid cells must be ranked as High, Medium, or Low based on the potential impacts from a large fire event. Rankings are developed based on the potential physical fire effects on the assets as well as the human valuation of them. For example, the air quality AAR health concerns of a large fire in brush covered lands are higher than grasslands due to production of larger volumes of smoke. The valuation of this effect will also differ based on the additional factor of how many people are potentially affected within specific air basins.

The potential physical effects of a large fire also include a susceptibility component for assets such as structures, historic buildings, or recreation that involve specific sites within a quad 81st. For example, the ranking procedure for structures involves a valuation component based on the number of housing units within a grid cell as well as a susceptibility component or exposure. The exposure measure includes site-specific factors near housing such as vegetation clearance, roof type, and accessibility.

3. Results of the AAR Analysis

The GIS computer program creates a table listing all of the Q81 grid scales for the entire county. Within each Q81 cell, individual rankings for each AAR are recorded. Ranking is based on the potential impact of a large fire event on each asset at risk. A score of 0 is used if the AAR is not present, 1 for a low impact, 2 for a medium impact and a 3 for a high impact. By combining all of the scores for the various AAR for each Q81 cell, a final score is derived. The computer program has an asset calculator tool that allows unique weighting of the various AAR in the summation process to reflect various valuation systems of different stakeholder groups.

Quad	81st	Fire-Flood	Air Qual	Water Supply	Wildlife	Erosion	Game Wildlife	Recreation	Water Storage	Hydro Power	Hist Bldg	Scenic	Range	Timber	Structures	Sum
Topo Quad	1	0	2	1	1	1	1	1	2	3	0	1	1	0	3	18
“	2	0	2	1	2	2	1	1	3	3	0	1	1	0	3	22
“	3	0	2	1	2	2	1	1	2	3	0	1	2	0	2	22
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“	81	0	2	1	2	1	1	2	3	3	0	1	2	0	1	19
Topo Quad	1	0	1	1	1	1	1	1	2	0	0	2	2	0	1	14
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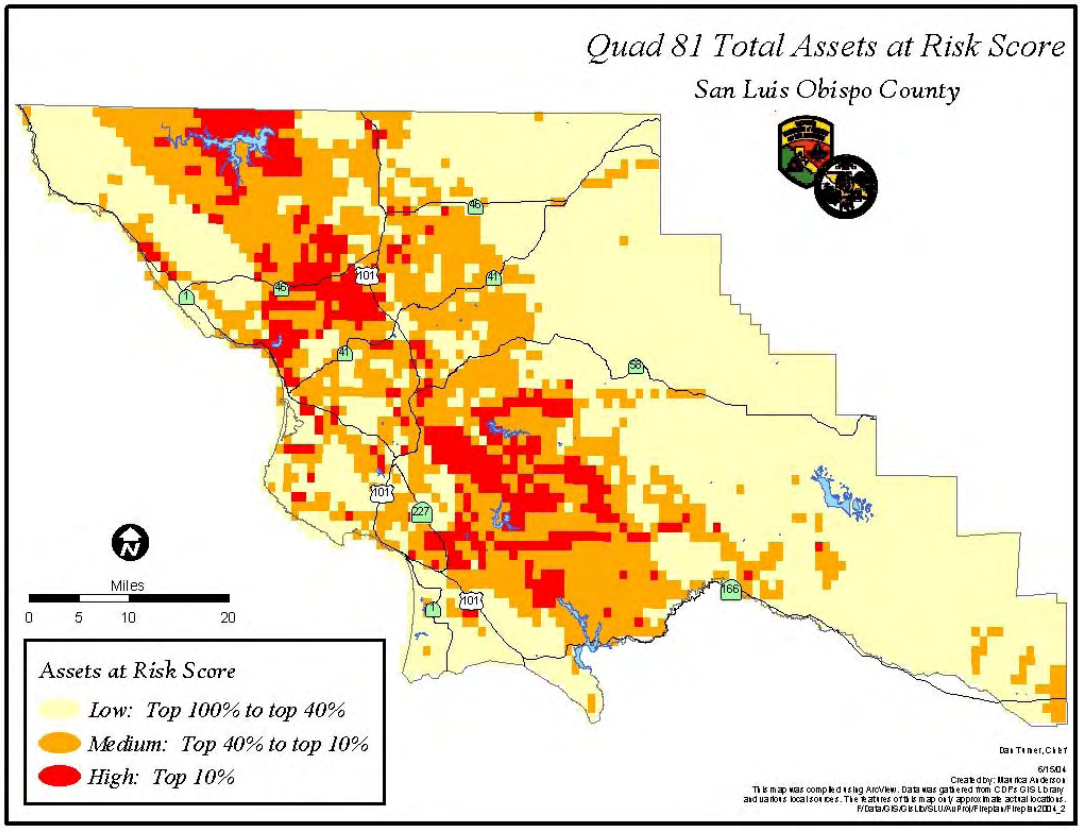
The final product is a map depicting areas in the county where assets are at risk. This map can then be utilized to focus prefire projects and resources.



CDF/County Fire staff analyzed the results derived from the “Asset at Risk” assessment and found that there were a significant number of areas with high assets at risk that were not being ranked correctly by the model. The Asset at Risk strategy is built on data

derived from best available sources. The overall results are based on the accuracy of this data. After analyzing the base data the following issues were discovered:

- The fuel data is not accurately displaying fuel model types found in the county. The base data was derived from satellite imagery and many brush fuel models are being displayed as a pine-grass model. Fuels are a component used in ranking the structure assets at risk.
- Under the structural analysis, housing density for some rural communities was being underestimated.
- Housing density is derived from the 2000 census data and there are some areas where housing density is incorrect.
- The historical buildings data layer has not been completed.
- Recreation, non-game wildlife, game wildlife, and infrastructure layers need to be updated.

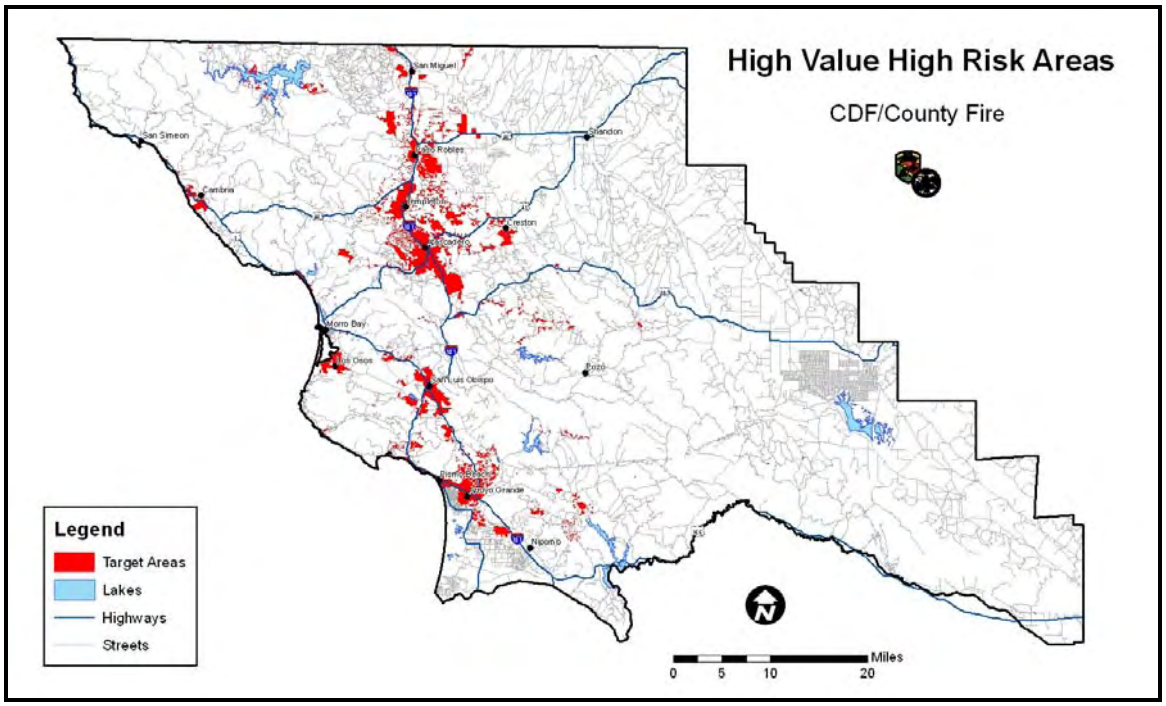
Updating data is a continual process. CDF/County Fire staff is working on improving the data for use in identifying assets at risk. Since this process takes a considerable amount of time, but the results are needed now, CDF/County Fire staff has developed an alternative method for capturing assets that are at risk as discussed below.

4. Target Areas

To mitigate the deficiencies in our “Asset at Risk” assessment, CDF/County Fire staff have augmented the original assessment with expert input from local CDF/County Fire Battalion Chiefs. The County of San Luis Obispo is divided into 5 battalions. Each battalion is administered by a Battalion Chief. Each battalion chief was asked to identify assets that would be at risk during wildland fires due to the following factors:

- Fuel loading
- Topography
- Weather
- Structural Ignitability
- Emergency Response
- Access
- Signage
- Water Supply

The identified assets were then grouped geographically into target areas. These target areas were then prioritized. The final product is a detailed map and list of areas that will be used to focus fire prevention activities and fuel treatments.



Battalion 1 Target Areas (listed in order of priority)

1) Santa Rita WUI
2) Morro Toro WUI
3) Cambria WUI
4) Hearst Castle
5) Communication Sites
6) Los Padres FS Botanical Gardens
7) Bishop Peak Recreational Site
8) San Luis Mountain Recreational Site
9) Laguna West WUI
10) Morro Bay WUI
11) Los Osos WUI
12) Montana De Oro State Park Campground
13) Whale Rock Reservoir
14) Cayucos WUI
15) Perfumo Canyon WUI
16) San Simeon State Park
17) Ragged Point WUI
18) San Luis V.O.R.
19) El Chorro Regional Park
20) San Simeon Acres WUI

Battalion 2 Target Areas (listed in order of priority)

1) Suey Creek WUI
2) Upper Lopez Canyon WUI
3) Blue Fox WUI
4) East Arroyo Grande WUI
5) Huasna WUI
11) Edna Valley Foothills WUI
12) Ranchita Estates WUI
6) Reservoir Canyon WUI
7) Nipomo Mesa/Dale WUI
8) Lopez Lake Recreational Area
9) Nipomo Hills WUI
10) Varian Ranch WUI

Battalion 3 Target Areas (listed in order of priority)

1) West Atascadero WUI
2) South Templeton/Santa Rita WUI
3) Asuncion WUI
4) PG&E High Power Line NW of Atascadero
5) South Shore Village
6) Rancho Delargo WUI
7) Cal Shasta Boat Club WUI
8) Tri Counties Boat Club WUI
9) Running Deer Ranch WUI
10) Oak Shores WUI
11) Christmas Cove WUI
12) Heritage Ranch WUI
13) Rural West Paso Robles WUI
14) Oak Shores Campground
15) Bryson\Hesperia WUI

Battalion 4 Target Areas (listed in order of priority)

1) Parkhill WUI
2) Santa Margarita Lake Recreational Area
3) Salinas River Drainage WUI
4) Pozo WUI
5) Mount Lowe WUI
6) Black Mountain WUI
7) Wilson Corner WUI
8) Garden Farms WUI
9) Tassajara WUI
10) Upper Highway 229

Battalion 6 Target Areas (listed in order of priority)

1) See Canyon WUI
2) Davis Canyon WUI
3) Squire Canyon WUI
4) Baron Canyon WUI
5) Port San Luis Obispo/Lighthouse
6) Diablo Canyon Power Plant
7) Pismo Beach WUI
8) San Luis Obispo Bay Estates WUI
9) Avila Beach WUI

B. Communities at Risk

Many of the target areas identified are categorized as communities. Communities tend to experience the greatest amount of costs and losses associated with wildland fires. In 2000 there was an initial attempt to identify those areas within California. During the 2000 fire season wildfires burned millions of acres throughout the United States. These fires dramatically illustrated the threat to human lives and development. Under Executive Order, the National Fire Plan was created as a cooperative, long-term effort of the USDA Forest Service, Department of the Interior, and the National Association of State Foresters, to protect communities and restore ecological health on Federal lands.

A major component of the National Fire Plan was funding for projects designed to reduce fire risks to people and their property. A fundamental step in realizing this goal was the identification of areas that are at high risk of damage from wildfire. Federal fire

managers authorized State Foresters to determine which communities were under significant risk from wildland fire on Federal lands.

The California Department of Forestry and Fire Protection undertook the task of generating the state's list of communities at risk. With California's extensive wildland urban interface situation, the list of communities extends beyond just those on Federal lands.

Three main factors were used to determine wildland fire threat to wildland urban interface areas of California:

- Ranking Fuel Hazards = ranking vegetation types by their potential fire behavior during a wildfire.
- Assessing the Probability of Fire = the annual likelihood that a large damaging wildfire would occur in a particular vegetation type.
- Defining Areas of Suitable Housing Density that Would Create Wildland Urban Interface Fire Protection Strategy Situations = areas of intermingled wildland fuels and urban environments that are in the vicinity of fire threats.

The following is a list of all the communities that were originally identified in San Luis Obispo County.

- Adelaide
- Arroyo Grande
- Atascadero
- Avila Beach
- Baywood-Los Osos
- Cambria
- Cayucos
- Creston
- Cuyama
- Paso Robles
- Grover Beach
- Lake Nacimiento
- Morro Bay
- Nipomo
- Oceano
- Pismo Beach
- San Luis Obispo
- San Miguel
- Santa Margarita
- Santa Maria
- Templeton

C. Rural Areas at Risk

The original list of communities at risk included primarily densely populated urban communities. Over the past decade, there has been an influx of people moving into rural areas. The result is an increase of single family residences on large parcels distributed over specific geographical areas. These developments are not organized as communities but are referred to by the County of San Luis Obispo Planning Department as "Rural Areas". Rural areas have special characteristics that increase the risk to residents and firefighters during wildland fires. During major fire events, multiple structures can be threatened at the same time. Access to these structures can be difficult due to winding roads, one lane roads, steep road grades, and long driveways. Delay in response by emergency equipment due to access puts structures at increased risk. Also, many of the rural areas are vegetated with fuels that are associated with extreme fire behavior conditions. The density of some of the rural areas has necessitated CDF/County Fire staff to identify and manage these areas like communities at risk. The following rural areas where identified during the asset at risk target area assessment:

- Asuncion
- Baron Canyon
- Blue Fox
- Bryson\Hesperia
- Cal Shasta Boat Club
- Christmas Cove
- Davis Canyon
- East Arroyo Grande
- Edna Valley Foothills
- Garden Farms
- Heritage Ranch
- Huasna
- Laguna West
- Morro Toro
- Nipomo Hills
- Nipomo Mesa/Dale
- Oak Shores
- Oak Shores Campground
- Parkhill
- Perfumo Canyon
- Ranchita
- Rancho Delargo
- Reservoir Canyon
- Running Deer Ranch
- Rural West Paso Robles
- Salinas River Drainage
- San Luis Obispo Bay Estates
- San Simeon Acres
- Santa Margarita Lake
- Santa Rita
- See Canyon
- South Shore Village
- South Templeton/Santa Rita
- Squire Canyon
- Suey Creek
- Tassahara
- Tri Counties Boat Club
- Upper Highway 229
- Upper Lopez
- Verian Ranch
- West Atascadero
- Wilson Corner

D. Community and Rural Area Risk Assessment

Once target areas have been identified a local risk analysis must be completed to determine what mitigations would reduce the risks. Utilizing the methodology outlined in the handbook Preparing a Community Wildfire Protection Plan, CDF staff will begin creating a Community Wildfire Protection Plan (CWPP) for the identified target areas.

A part of the CWPP process is preparing a risk assessment. The development of a community or rural area risk assessment will help to effectively prioritize areas for treatment and identify the highest priority uses for available financial and human resources. CDF/County Fire Staff is in the process of developing a risk assessment matrix. This matrix will identify all of the factors that contribute to costs and losses associated with wildland fires. Factors will include:

- Fuel Hazard
- Weather
- Topography
- Risk of Wildland Fire Occurrence
- Homes, Businesses, and Essential Infrastructure at Risk
- Local Preparedness and Firefighting Capability
- Emergency Access
- Water Supply
- Building Construction
- Clearance

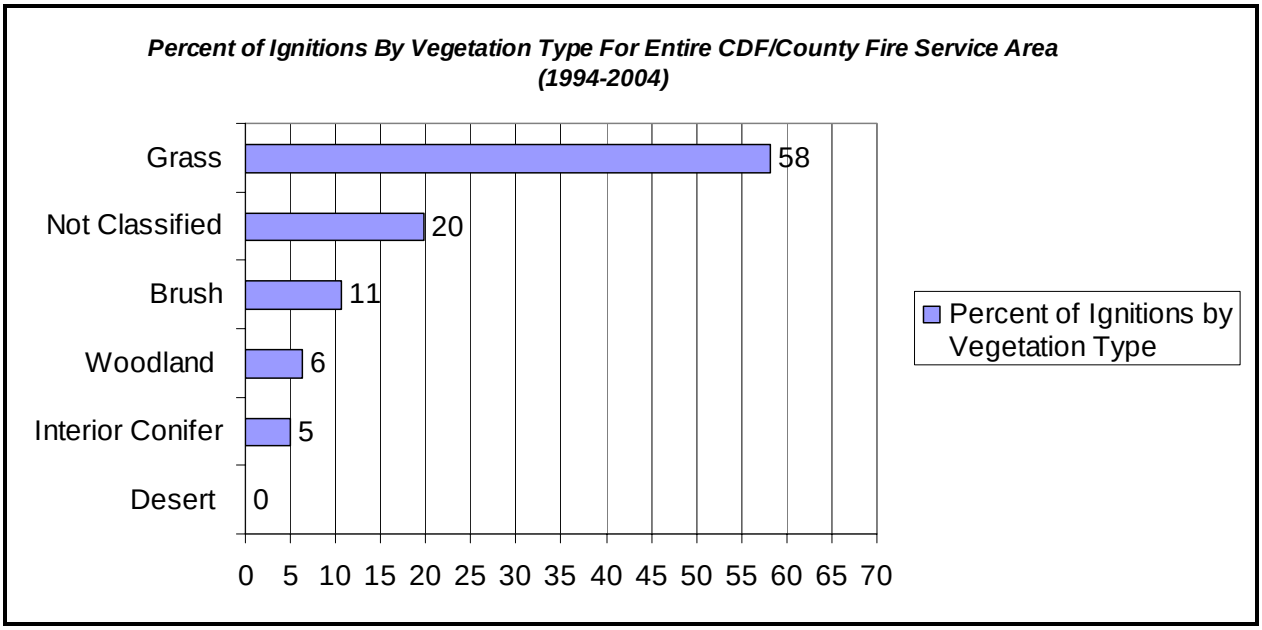
A rating system of low, medium and high risk will be used to represent the risk posed to each community. These ratings will assist in prioritizing resources and funds while developing a county wide action plan.

E. Ignitions Assessment

The following ignition data was compiled from recorded incident information for CDF/County Fire response areas from 1994 through 2004. There have been approximately 1897 ignitions during this time. This data is used to identify areas within the county that have a higher potential for costly damaging fires. CDF/County Fire Staff analyze ignitions by vegetation type and ignitions by cause.

Ignitions by Vegetation Type

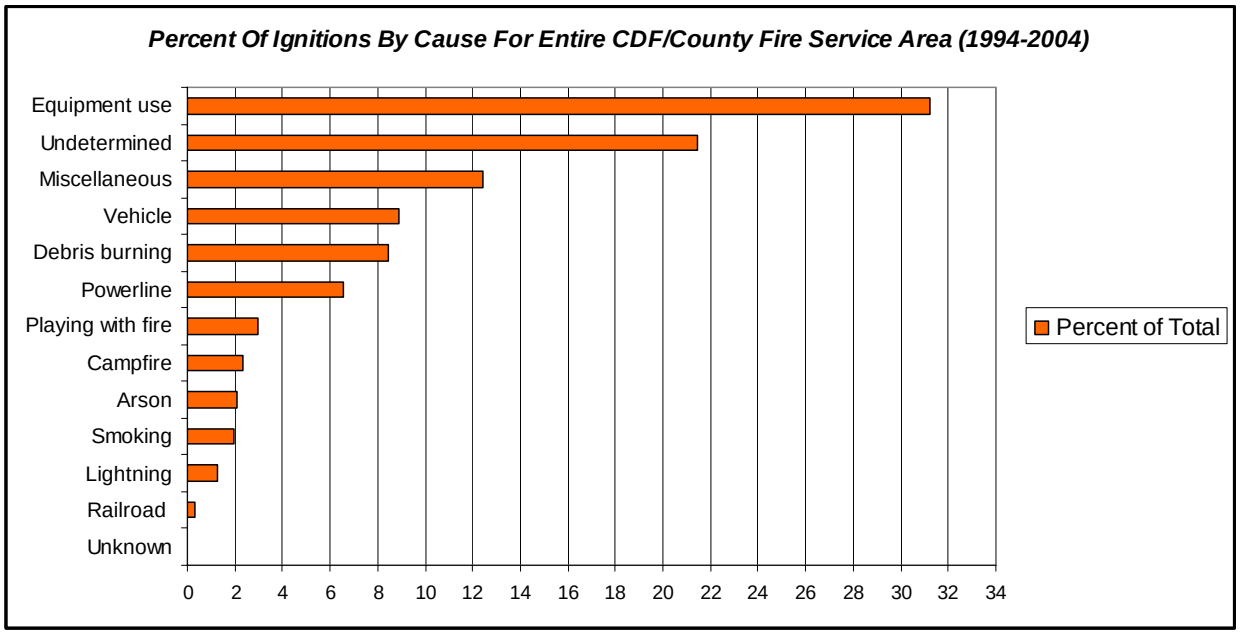
The following analysis utilizes CDF/County Fire wildland fire ignition data from 1994-2004 to determine the percentage of ignitions in the common vegetation types for San Luis Obispo County. This data can be utilized to determine cause patterns and assist in implementing fire prevention programs aimed at reducing those ignitions. Programs such as our “Mow Before 10:00” signs target ignitions that are started in grass.

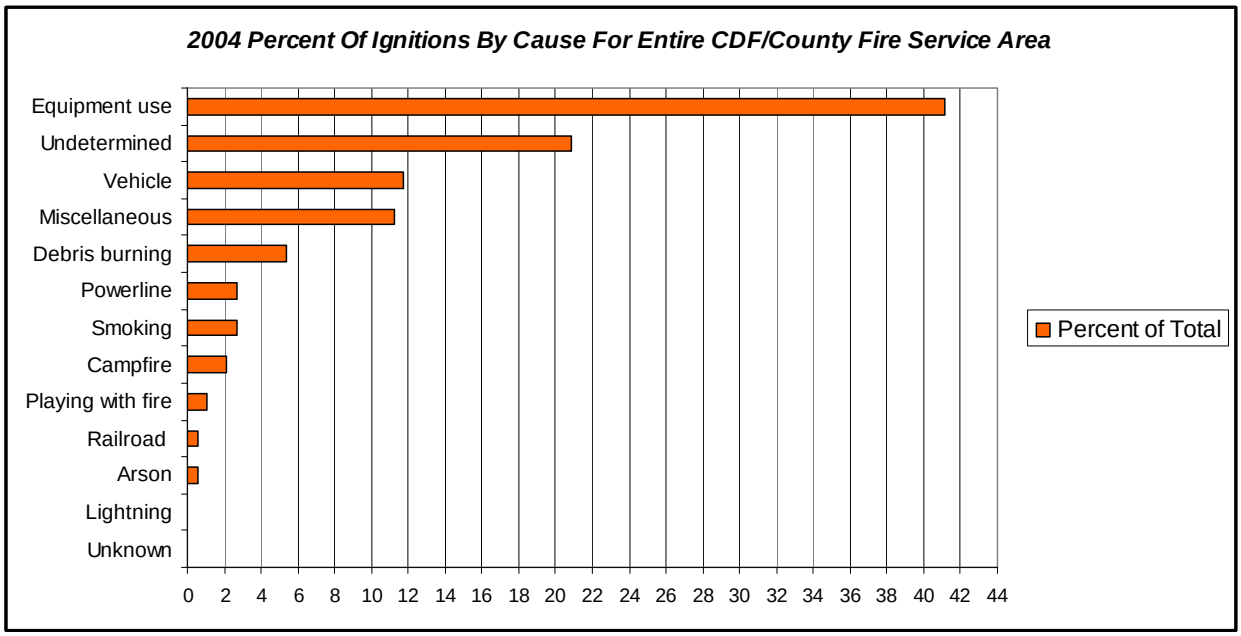


Ignitions by Cause

The following analysis utilizes CDF/County Fire wildland fire ignition data from 1994-2004 to determine the percentage of ignitions by cause for San Luis Obispo County. This analysis looked at the entire county from 1994-2004, the entire county for 2004 and each battalion from 1994-2004. This analysis can be utilized to implement fire prevention strategies aimed at reducing selected causes of ignitions. CDF/County Fire has used this data to promote fire prevention education programs for spark arrestors, debris burning, and playing with fire.

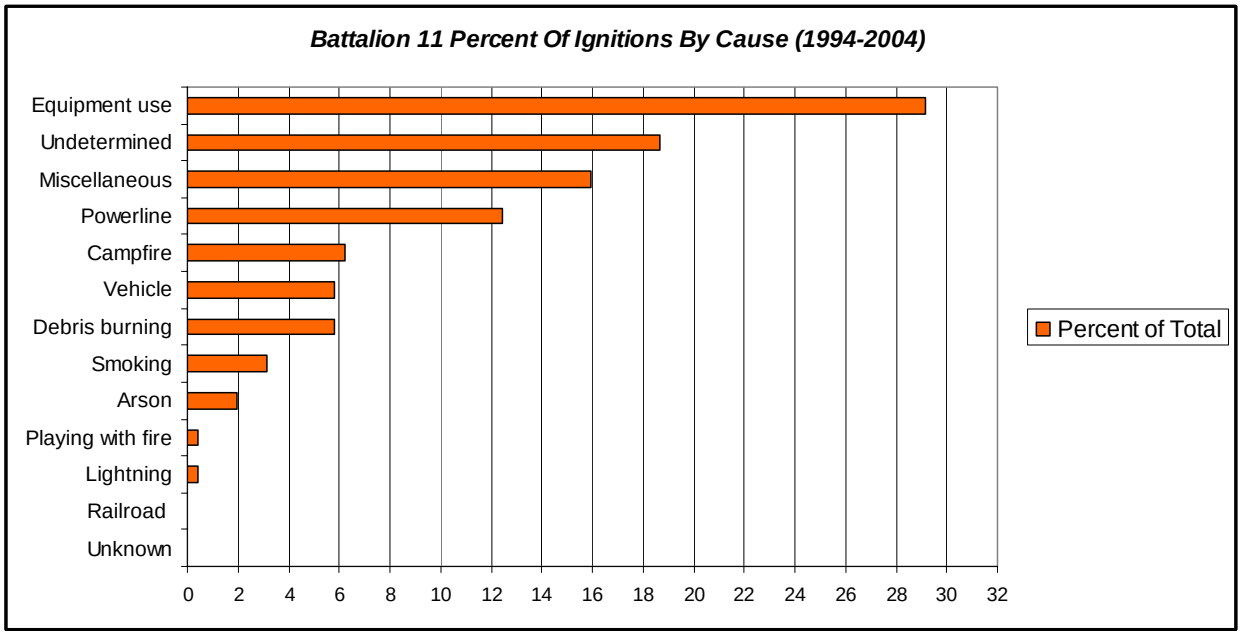
Entire CDF/County Fire Service Area Assessment





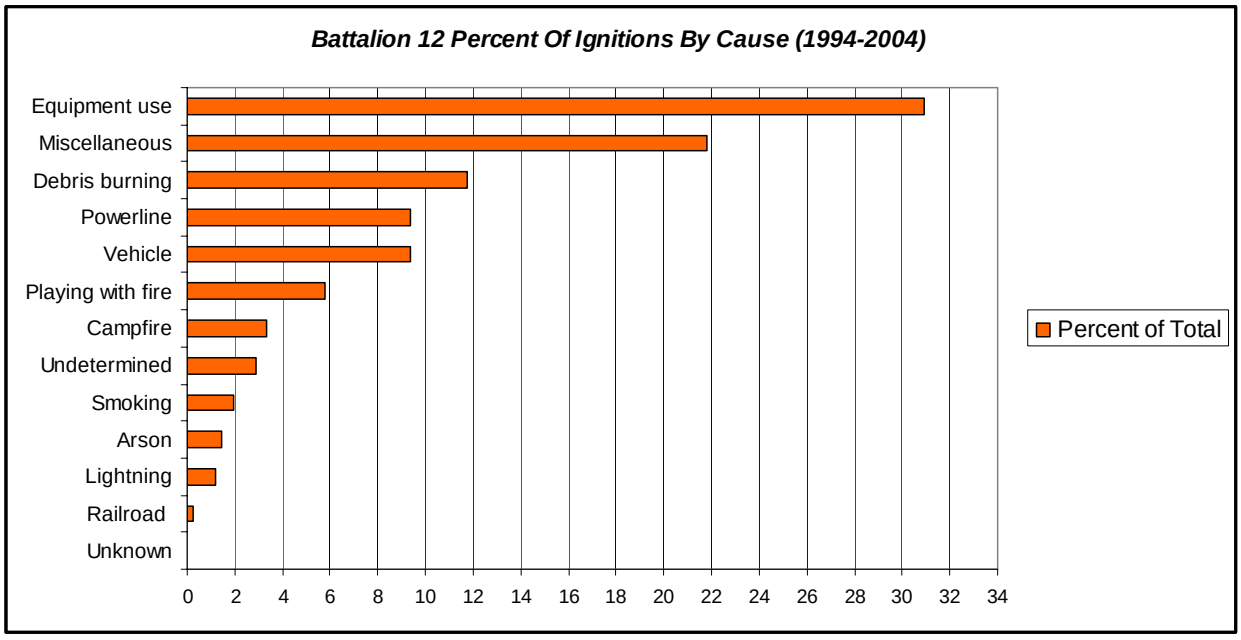
Battalion 11 Ignition Assessment

- There have been 257 ignitions in Battalion 11 from 1994-2004
- Ignitions in Battalion 11 account for 14 percent of the total ignitions from 1994-2004



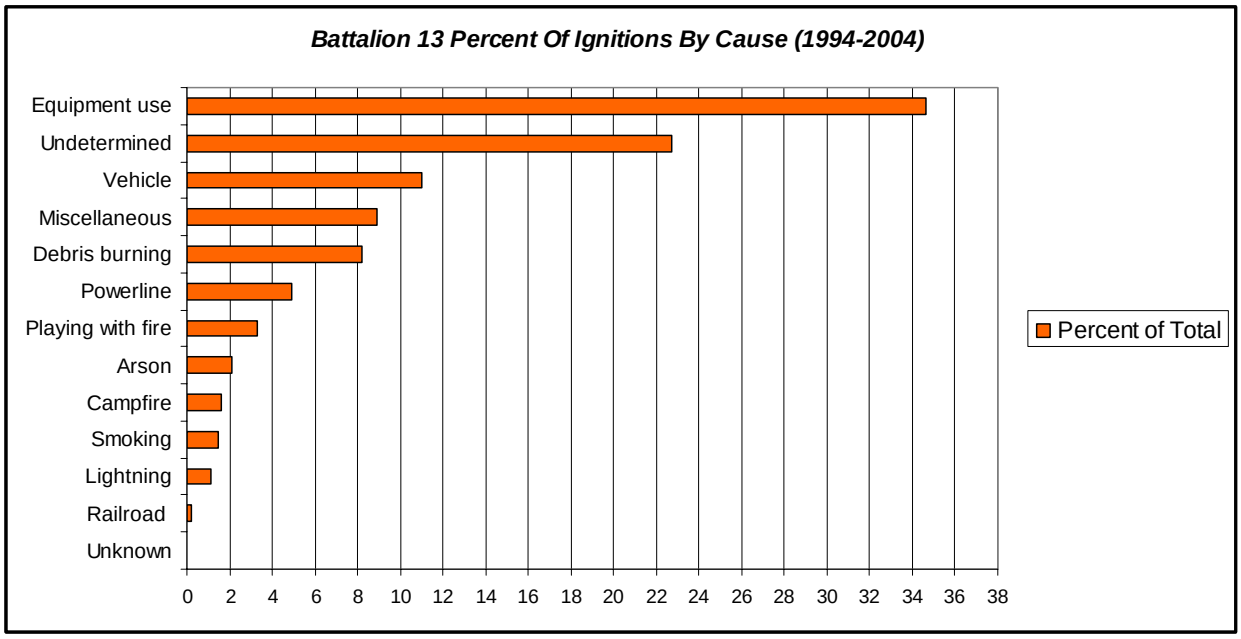
Battalion 12 Ignition Assessment

- There have been 417 ignitions in Battalion 12 from 1994-2004
- Ignitions in Battalion 12 account for 22 percent of the total ignitions from 1994-2004



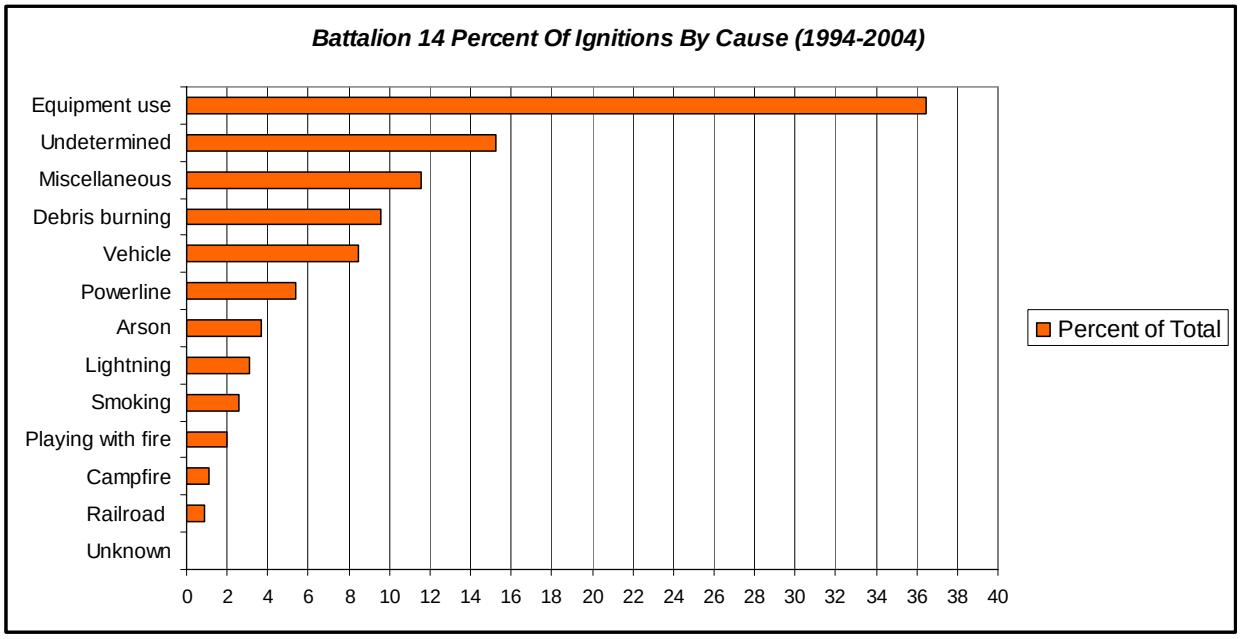
Battalion 13 Ignition Assessment

- There have been 820 ignitions in Battalion 13 from 1994-2004
- Ignitions in Battalion 13 account for 43 percent of the total ignitions from 1994-2004



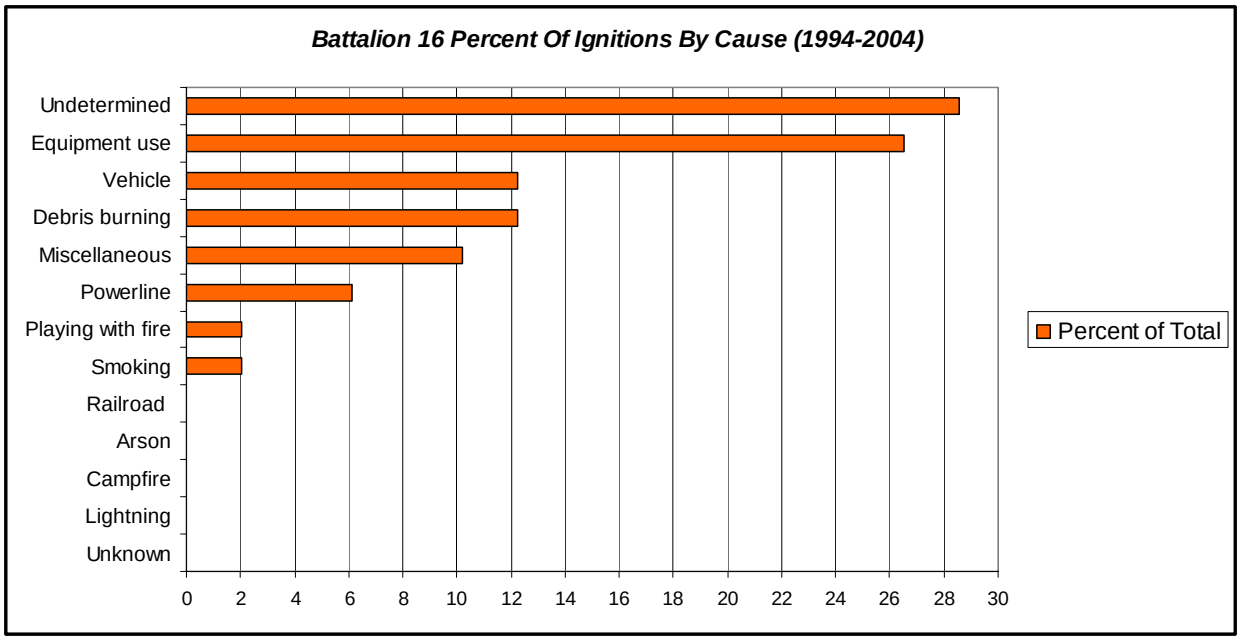
Battalion 14 Ignition Assessment

- There have been 354 ignitions in Battalion 13 from 1994-2004
- Ignitions in Battalion 14 account for 19 percent of the total ignitions from 1994-2004



Battalion 16 Ignition

- There have been 49 ignitions in Battalion 16 from 1994-2004
- Ignitions in Battalion 16 account for 3 percent of the total ignitions from 1994-2004



IV. Action Plan

CDF/County Fire staff understands that an effective action plan is dependant on a thorough risk assessment and cooperation and coordination with stakeholders. CDF/County Fire staff have made an initial county wide risk assessment and initiated contact with cooperating agencies and the main stakeholder groups within the county. For 2005 CDF/County Fire staff will:

- Continue to collaborate and coordinate with stakeholders
- Conduct Community and Rural Area Wildfire Protection Plans
- Continue to review, modify and enforce structural ignitability standards
- Continue to propose, prepare and administer fuel treatment projects

A. Community and Rural Area Wildfire Protection Plans

To address the special risks associated with communities and rural areas, CDF/County Fire staff will be conducting community wildland protection plans (CWPP) during 2005 in the following areas:

- Baron Canyon
- Cal Shasta Boat Club
- Cambria
- Christmas Cove
- Davis Canyon
- Heritage Ranch
- Morro Toro
- Oak Shores
- Parkhill
- Rancho Delargo
- Ranchita Estates
- Running Deer Ranch
- Santa Margarita Lake
- Santa Rita
- See Canyon
- South Shore Village
- South Templeton/Santa Rita
- Squire Canyon
- Suey Creek
- Tri Counties Boat Club
- Upper Lopez Canyon
- West Atascadero

CWPP's are intended to engage the public, encourage cooperation and coordination between agencies, identify risks and recommend mitigations to reduce those risks. The risk assessment process will also be utilized to develop recommendations to improve the county general plan which regulates development patterns. The community risk assessments will be administered by CDF/County Fire Prefire staff in cooperation with responsible agencies and the residents from the community. The assessment will follow the following steps:

I. Convene stakeholders

CDF/ Prefire staff will contact and encourage involvement by all of the effected stakeholders within the community at risk. Substantive input from a diversity of interests will ensure that the final document reflects the highest priorities of the community. It will also help to facilitate timely implementation of recommended projects. Potential stakeholders might include:

- Existing collaborative community groups
- City Council members
- County Board of Supervisors
- Resource Advisory Committees
- Homeowners Associations
- CA Department of Fish and Game
- CA Department of Transportation
- County Public Works
- Local and/or state emergency management agencies
- Water districts
- Utilities
- Recreation organizations
- Environmental organizations
- Local Chambers of Commerce
- Watershed councils

II. Establish a Base Map

CDF/County Fire Staff using available technology and local expertise will develop a base map of the community and adjacent landscapes of interest. This map will provide a visual information baseline from which community members can assess and make recommendations regarding protection and risk-reduction priorities. To the extent practicable, the map will identify:

- Inhabited areas at potential risk to wildland fire
- Areas containing critical human infrastructure—such as escape routes, municipal water supply structures, and major power or communication lines—that are at risk from fire disturbance events
- A preliminary designation of the community's WUI zone

III. Conduct a "Community" or "Rural Area" Risk Assessment

The development of a community or rural area risk assessment will help to effectively prioritize areas for treatment and identify the highest priority uses for available financial and human resources. CDF/County Fire Staff is in the process of developing a risk assessment matrix. This matrix will identify all of the factors that contribute to costs and losses associated with wildland firefighters. Factors will include:

- Fuel Hazard
- Weather
- Topography
- Risk of Wildland Fire Occurrence
- Homes, Businesses, and Essential Infrastructure at Risk
- Local Preparedness and Firefighting Capability
- Emergency Access
- Water Supply
- Building Construction
- Clearance

A rating system of low, medium and high risk will be used to represent the risk posed to each community. These ratings will assist in the final decision-making process.

IV Establish Community Hazard Reduction Priorities

Once the community assessment and base map are completed, CDF/County Fire staff will convene all interested parties to discuss the results and their implications for local protection and hazard mitigation needs. A key objective will be to develop the community's prioritized recommendations for fire prevention measures. Recommendations will address fuel treatments and measures to address structural ignitability. CDF/County Fire will also identify and develop strategies to improve emergency preparedness and fire response capability.

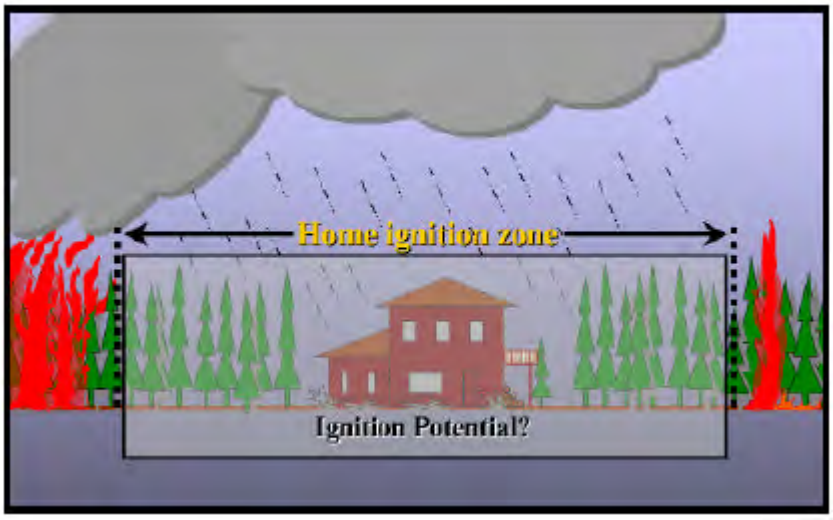
V Develop an Action Plan and Assessment Strategy

CDF/County Fire will coordinate with stakeholders to develop an action plan that identifies roles and responsibilities, funding needs, and timetables for carrying out the highest priority projects. This process will also involve establishing an assessment strategy for the CWPP to ensure that the document maintains its relevance and effectiveness over the long term.

B. Structural Ignitability Fire Prevention Standards

Wildland fires and fire sieges have been a significant part of the history of California. Major fire sieges have occurred in 1985, 1993, and 2003. In 2003 southern California experienced one of the most devastating wild fire disasters in our states history. During the 2003 fire siege, 14 major fires burned over 750,043 acres, 24 lives were lost and over 3,710 homes were destroyed. The environmental conditions that existed prior to the fire siege in southern California can also be found in parts of San Luis Obispo County. An after incident analysis of the 2003 fire siege was conducted and one issue that was identified was that county fire safe building requirements in Ventura and Los Angeles Counties played a significant role in reducing structure losses (The California Fire Siege 2003). Fire Safe building construction standards and defensible space have long been linked to structural survivability. Research results indicate that the home and

its immediate surroundings within 100-200 feet (30-60 meters) principally determines the home ignition potential during severe wildland urban interface fires. This area has been termed the home ignition zone. (Cohen)



US Forest Service

Homes can ignite from fires in the wildland urban interface from two general sources:

1) Flames directly impinging on the structure (radiation and convection heating)
2) Firebrands accumulating directly on the home.

In order to address structural ignitability and the structure ignition zone, CDF/County Fire utilizes state and local ordinances, fire prevention education, fire prevention inspections and enforcement.

1. Fire Prevention Statutes and Regulations

CDF/County Fire is responsible for the enforcement of numerous State and County statutes, ordinances and standards aimed at reducing the fire risk in the wildland urban interface. They include:

- State Public Resources Code
- State Health and Safety Code
- Locally adopted California Fire Code
- Locally adopted California Building Code
- Nationally recognized Standards
- County General Plan

a) Public Resources Code 4290 – California Code of Regulations (CCR) Chapter 1, Division 1.5 of Title 14

PRC 4290 is the Statute that requires emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification in areas designated as State Responsibility Area (SRA).

> 4290. (a) The board shall adopt regulations implementing minimum fire safety standards related to defensible space which are applicable to state responsibility area lands under the authority of the department. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 1991. The board may not adopt building standards, as defined in Section 18909 of the Health and Safety Code, under the authority of this section. As an integral part of fire safety standards, the State Fire Marshal has the authority to adopt regulations for roof coverings and openings into the attic areas of buildings specified in Section 13108.5 of the Health and Safety Code. The regulations apply to the placement of mobile homes as defined by National Fire Protection Association standards. These regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map for the tentative map is approved within the time prescribed by the local ordinance. The regulations shall include all of the following:
>
> (1) Road standards for fire equipment access.
> (2) Standards for signs identifying streets, roads, and buildings.
> (3) Minimum private water supply reserves for emergency fire use.
> (4) Fuel breaks and greenbelts.
> (b) These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state.

CCR Chapter 1, Division 1.5 of Title 14 is the regulation adopted by the state regulatory agency CDF and the Board of Forestry to implement, interpret and make specific regulations to enforced and administered PRC 4290 and other fire safety statues. This is where the specific requirements such as road dead end lengths, road signage design and road turnaround dimensions are found.

b) Public Resources Code 4291

PRC 4291 implemented minimum fire safety standards related to defensible space within state responsibility areas:

> …any person that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, shall maintain

around and adjacent to the building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side of the building or structure or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This 30 foot fuel break can be increased to a distance of 100 feet if it is determined that a special hazard exists. Also required under PRC 4291 is the removal of that portion of any tree that extends within 10 feet of the outlet of a chimney or stovepipe. Maintain any tree adjacent to or overhanging a building free of dead or dying wood. Maintain the roof of a structure free of leaves, needles, or other dead vegetative growth. Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to a fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.

c) SB 1369 (Keuhl)

On January 1, 2005, SB 1369 (Keuhl), was enacted. This legislation was in response to the enormous costs and losses associated with the 2003 Firestorm. This legislation will require:

Changes in Public Resources Code 4291

Increase from 30 feet to 100 feet the minimum clearance requirement for flammable vegetation around structures in State Responsible Areas (SRA) and Local Responsibility Areas (LRA) designated as very high fire hazard severity zones (VHFHSZ); Allow for greater clearance if required by state law, or local ordinance, rule or regulation; require property owners proposing to build a new structure or rebuild a structure that was damaged by a fire in these areas to obtain certifications from their local building official that the plans and construction comply with all building standards, including special fire safety standards developed by the State Fire Marshal (SFM) for homes in high fire risk areas, and provide a copy of the certifications to their property insurance carrier upon request; and Authorize the state to remove flammable vegetation if a landowner fails to do so, and impose a lien on the property for the costs of the vegetation clearance.

Due to issues with interpretation and implementation, this law is not scheduled to be fully enforced until December 31, 2005.

Changes in California Building Code

Under SB 1369 the Office of the California State Fire Marshall has been tasked with developing wildland urban interface building construction standards. The Office of the California State Fire Marshall has been diligently working on these standards for several months and is close to a final product. The purpose of these standards will be to increase the ability of a building or structure to resist the intrusion of flame or burning embers through the use of performance and prescriptive requirements. These codes will

apply to building materials and systems used in the exterior design for newly constructed buildings and structures subject to California Building Code located within:

- State Responsibility Areas designated as Very High Fire Hazard Severity Zones by the Director of Forestry and Fire Protection pursuant to Article 9 (commencing with Section 4201) of Chapter 1 of Part 2 of Division 4 of the Public Resources Code.
- Very High Fire Hazard Severity Zones designated by a local agency pursuant to Chapter 6.8 (commencing with Section 51175) of Part 1 of Division 1 of Title 5 of the Government Code.
- Wildland Urban Interface Communities and other areas designated by a local agency pursuant to Health & Safety Code 13108.5.

The new standards concentrate on three areas; roofs, exterior walls and ancillary structures. Roof assemblies will be required to provide protection in accordance with SFM-4 “Roof Assembly Test Standard,” or have a Class A roof covering or Class A roof assembly. Also addressed are roof spaces and openings, roof valleys, roof vents, eave protection, skylights and roof gutters and downspouts. Exterior walls will be required to provide protection from the intrusion of flames and embers in accordance with SFM-1 “Exterior Wall Test Standard.” The standard will also address exterior wall openings, exterior glazing, glazing in doors, wall vents, appendages and floor projections, unenclosed under floor protection, decking and ancillary structures.

d) Local Ordinance

San Luis Obispo County, as well as all other jurisdictions in the County, has adopted with amendments, the California Fire Code (CFC) and the California Building Code (CBC) into local ordinance. These regulations have many requirements for the protection of the citizens from wildland urban interface fires. These include:

- Water requirements
- Minimum access road requirements
- Roofing requirements
- Construction requirements
- Hazard Abatement
- Turnaround requirements

e) County General Plan

All development being reviewed by County Planning Staff in the County is also reviewed by the fire department to ensure the project is designed within the parameters of the County adopted General Plan. This document includes the Safety Element, access requirements, housing density, allowable occupancy use, community water system requirements, and property set back requirements. This review makes sure the

development has secondary access, proper water storage, and defensible space around the development and will use fire safe construction materials prior the subdivision of lands.

2. Inspection

CDF/County Fire has an inspection process in place to assure compliance with fire and safety codes. This includes both new construction and maintenance inspections of existing development. New construction is done by fire prevention staff as part of the county building permit process. The maintenance inspection program both the State's LE-38 program and the local hazard abatement programs are done by both fire prevention staff and by fire engine companies. They include inspection of:

- Clearance around Structures
- Equipment safety
- Power Line Right-Of-Way clearance
- Railroad Rights-Of-Way clearance
- Solid Waste Facilities clearance and safety

The hazard reduction inspection program (LE-38 program) is managed by CDF/County Fire field Battalion Chiefs. Engine companies are responsible for performing inspections within their initial attack areas. These inspections are usually performed during spring and summer. Engine companies only inspect properties where the owner is present. If a property owner is absent, the engine company is directed to leave a letter requesting the homeowner to set up an appointment for a reinspection. Engine companies are also instructed to leave letters at residences where access is blocked due to gates. During the inspection, engine company personnel review and educate the homeowner on fire prevention requirements. If there are violations, a notice is issued and the homeowner is instructed to mitigate the violation. The engine company will then return for a reinspection. If the violation is not mitigated, a citation may be issued and turned over to fire prevention staff for enforcement.

<u>2004 Accomplishments</u>

- In 2004 CDF/County Fire performed 2003 inspections, 105 of those inspections resulted in violations.
- In 2004 approximately 170 personnel hours were dedicated to the inspection program.
- In 2004 CDF/County Fire issued over 1000 fire safety plans and compliance inspections for new construction.
- In 2005 CDF/County Fire issued over 800 Notice of Violation letters for hazard abatement (weed abatement) in local jurisdictions.

2005 Projects

- Focus limited engine company time to Hazard Reduction (LE-38) inspections to unit wide priority target areas.
- Develop unit wide inspection training material for engine companies.
- Research the costs and benefits of a pre fire season inspection mailer.
- Look into an official county compliance date.
- Evaluate the time frame for inspection compliance.
- Utilize GIS and GPS for hazard abatement program parcel identification.

3. Fire Prevention Education

Educating residents is a key component in reducing overall costs and losses attributed to wildland fires. CDF/County Fire employs Fire Prevention Specialists to provide public fire safety education material and presentations. CDF/County Fire personnel are active participants in the County Fire Prevention Association and the San Luis Obispo County Community FireSafe Council (SLOFSC). Cooperation and coordination between agencies and the public are important.

The following are wildland fire prevention projects completed in 2004:

- Living with Fire Newspaper Inserts-The SLOFSC will be distributing these inserts in the local paper in July 2005.
- Fire Safe Demonstration Building-The SLOFSC constructed a building at the California Mid State Fair to demonstrate fire safe building construction and landscaping practices.
- Mid State Fair-CDF/County Fire staff present fire prevention education material and display firefighting equipment at a display located at the California Mid State Fair.
- Fire Safety Billboards-CDF/County Fire has billboards that are installed in the spring which depict fire safety messages such as “Mow before 10:00 AM”.
- Evacuation Plans for the communities of Parkhill and Avila Valley-CDF/County Fire staff developed evacuation plans for educating residents on what do during emergencies.
- Conducted fire prevention education programs for local schools and community groups.

The following is list of projects CDF/County Fire staff will initiate in 2005:

- CDF/County Fire Personnel will continue to cooperate with the San Luis Obispo County Community FireSafe Council and County Fire Prevention Association to coordinate wildland fire prevention education.

- CDF/County Fire staff in coordination with the SLOFSC is in the initial planning stages for a FireScaping seminar. This program will educate landscaping professionals, fire prevention inspectors and homeowners on fire safe landscaping techniques.

- CDF/County Fire staff will research the preparation of FireScape Landscaping educational flyers.

- CDF/County Fire staff will research developing an evacuation education flyer.

- CDF/County Fire staff will work with the California Polytechnic State University Landscaping Department in increasing awareness of FireSafe landscaping techniques.

- CDF/County Fire staff will continue to conduct fire prevention education programs for local schools and community groups.

C. Hazard Fuel Treatments

Fuel treatments are methods used to reduce the likelihood of fire ignitions and to reduce the fire intensity if an ignition occurs. The most common methods of fuel treatments are prescribed burning, mechanical thinning and hand thinning. Prescribed Burning is used to reduce fuel loading in fire adapted vegetation types. Mechanical fuel treatments involve the use of equipment to remove and reduce fuels. Common equipment includes mulchers and dozers. Hand fuel treatments involve the use of hand crews to manually remove fuels. These fuels can be removed or reduced by piling-and-burning or chipping. The following is a list of fuel treatment projects that were completed in 2004:

1. 2004 Fuel Treatment Projects

a) Cal Shasta Fuel Break

The Cal Shasta Fuel Break is located on South Shore Drive and Gage Irving Road on the Southwest side of Lake Nacimiento. The purpose of this fuel break was to provide a safe escape route for the communities of Cal Shasta, South Shore Village, and Rancho Delargo and to provide a planned fire line to stop a moving wildland fire. These

communities have a high recreation population during the summer months and South Shore Drive/Gage Irving Road is the only access route in and out of these communities. The fuel break is approximately 1.5 miles long and 150 feet wide (75' on each side of the road). Brush was removed by CDF/County Fire handcrews. The brush was then reduced by chipping and piling-and-burning.

b) Bee Rock Fuel Break

The Bee Rock Fuel Break is located on Bee Rock Road which is on the North side of Lake Nacimiento. The purpose of this fuel break was to provide a safe escape route for recreational areas on the North side of Lake Nacimiento and provide a secondary escape route for the Community of Oak Shores as well as functioning as a fuel break in heavy chaparral. The fuel break is approximately 1 mile long and 150 feet wide (75' on each side of the road). Brush was removed by CDF/County Fire handcrews. The brush was then reduced by chipping and piling-and-burning.

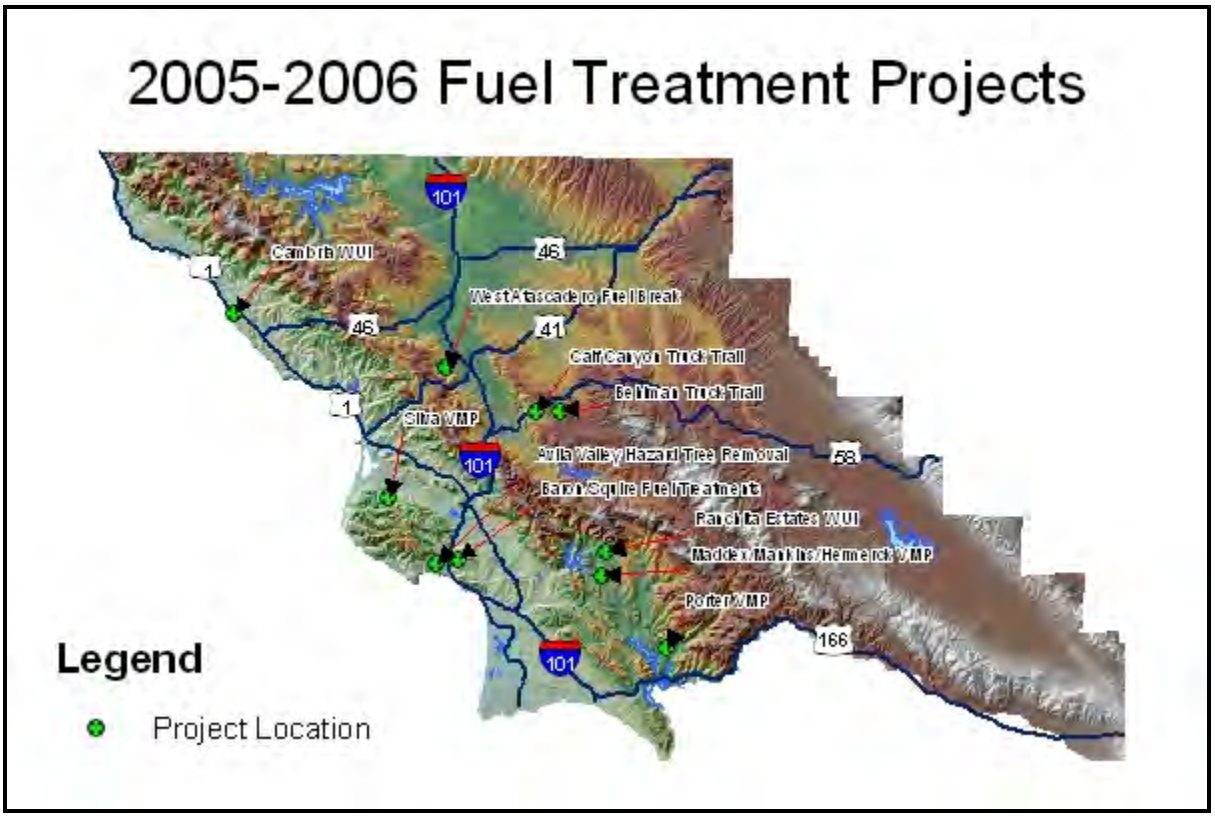
c) Brush Disposal Crew

This project was originally initiated by CDF/County Fire, the San Luis Obispo County Community FireSafe Council (SLOFSC) and the Air Pollution Control District in 1999. The intent of this project is to promote and educate the public about defensible space around their homes and provide an alternative to burning. Through grant funding, a California Conservation Crew, equipped with a chipper, is hired to chip material created by residents while preparing defensible space around their homes. Chipping events are usually set up and sponsored by communities, local fire

departments or homeowners groups. Homeowners are required to sign up for this service, cut the brush from around their homes and either pile the brush curbside or deliver it to a designated disposal site. This project has been a huge success. Over 1500 tons of material was chipped during 2004.

2. 2005-2006 Planned Fuel Treatment Projects

The following is a list of fuel treatment projects CDF/County Fire personnel will be working on in 2005-2006. With the initiation of Community Wildfire Protection Plans (CWPP's), additional fuel treatment projects will be identified and prioritized for target areas within the county over the coming year. By identifying and prioritizing these projects CDF/County Fire staff will be able to effectively utilize limited resources and funds. Additionally, CDF/County Fire Staff will be able to link projects that have similar objectives and resource needs. This will facilitate applying for grant funding and project implementation.



Porter VMP

This is a cooperative project between CDF/County Fire, San Luis Obispo County Range Improvement Association and a private land owner. The project involves utilizing prescribed burning to treat approximately 1200 acres of brush. This fuel treatment

project has range improvement benefits as well as protecting wildland urban interface assets at risk. This project is scheduled for fall 2005.

Maddux/Mankins/Hermerck VMP

This is a cooperative project between CDF/County Fire, San Luis Obispo County Range Improvement Association and a private land owner. This project involves utilizing prescribed burning to treat decadent brush for range improvement and public safety. This project is adjacent to the Rancheta Estates WUI area that has been identified as a target area under our risk assessment. This project will provide a fuel break between the communities and the wildlands. This project is scheduled for fall 2005.

Silva VMP

This is a cooperative project between CDF/County Fire, San Luis Obispo County Range Improvement Association and a private land owner. This project involves utilizing prescribed burning to treat decadent brush for range improvement and public safety. This project is located adjacent to the community of Los Osos and is located within the Morro Bay Estuary. This project is scheduled for fall 2005.

West Atascadero Fuel Break

West Atascadero has been identified as a target area within Battalion 13. To reduce the risk to residents within this wildland urban intermix area, a fuel break will be constructed to provide a control line. This project is a cooperative effort between CDF/County Fire, Atascadero Fire Department and private landowners. This fuel break is currently in the planning stage. CDF/County Fire personnel are working with private landowners, conducting an initial environmental review and evaluating resource needs.

Avila Valley Hazard Tree Removal

This project is located in the San Luis Bay Estates which is within the Avila Beach Community Services District. The San Luis Estates Focus group is a member of the San Luis Obispo County Community FireSafe Council. The focus group recently applied and has received tentative approval for a hazard tree removal project. This project involves chipping of dead tree material and trimming of trees to reduce the fire hazard adjacent to structures. If grant funding materializes in late October, work will take place in winter through spring 2006.

Squire/Barron Canyon Fuel Reduction Projects

The Squire/Barron Canyon areas have been identified as target areas in Battalion 16. During 2005-2006 CDF/County Fire Staff in cooperation with the Squire/Barron Canyon FireSafe Council Focus Group will be integrating past preplanning and fuel treatment plans into a Community Wildfire Protection Plan (CWPP). In 2004 CDF/County Fire Staff in cooperation with the focus group prepared a preattack plan, an evacuation plan and fuel treatment plan. These documents will be integrated into the CWPP format. The Squire/Barron Focus Group applied for grant funding in 2005 to fund a fuel break, road access fuel removal and open space fuel reduction project utilizing goats. Grant funding was unsuccessful. CDF/County Fire Staff along with the San Luis Obispo County Community FireSafe Council will continue research funding opportunities to initiate these projects.

Ranchita Estates Fuel Treatment Plan

Ranchita Estates has been identified as a community at risk within Battalion 12. During 2005-2006 CDF/County Fire Staff in cooperation with the Ranchita Estates FireSafe Council Focus group, and other effected stakeholders will be conducting a Community Wildfire Protection Plan (CWPP). A component of this plan will be an action plan to address issues identified during the community risk assessment. Part of the action plan will address fuel treatments. CDF/County Fire in cooperation with Ranchita Estates initiated the hand removal and piling and burning of brush adjacent to an evacuation route in 2005. During the CWPP process, the current fuel treatment projects will be reevaluated and recommendations for additional fuel treatment projects will be identified and initiated in late 2005-early 2006.

Cambria WUI

Cambria has been identified as a community at risk and a top target area within Battalion 11. During 2005-2006 CDF/County Fire Staff in cooperation with the Cambria FireSafe Council Focus Group, Cambria Fire and other effected stakeholders will be conducting a Community Wildfire Protection Plan (CWPP). A component of this plan will be an action plan to address issues identified during the community risk assessment. Cambria currently has a fuel treatment plan in place. In 2003, the East/West Fuel Break was completed. This fuel break was constructed using hand removal of fuels and chipping. This plan will be reevaluated during the CWPP process and additional fuel treatment projects will be initiated in late 2005-early 2006.

Brush Disposal Crew

As discussed in the 2004 fuel treatment section, the Brush Disposal Crew has been a great success and CDF/County Fire in cooperation with the SLOFSC will continue to support it. This project has grown to a level where CDF/County Fire Staff have been overwhelmed with administration of this project. CDF/County Fire Staff recommend that this program should have a part time employee hired to administer this program.

Administration includes setting up chipping events with groups, working with the contractor, maintenance of chippers and preparing grant applications and quarterly reports. CDF/County Fire and the SLOFSC will continue to look for grant funding to continue this program.

Calf Canyon and Behlman Truck Trails

Both of these truck trails are located within the Parkhill WUI as identified under or assets at risk assessment. CDF/County Fire has been maintaining these roads for firefighting assess and control lines. Maintenance includes road grading and brush removal. Access roads have been successfully used for control lines on major fires in the past including the 2003 Highway 58 Fire.